# CUSTOMER RELATIONSHIP MANAGEMENT INFORMATION SYSTEM FOR GSM OPERATORS

# (A CASE STUDY OF MTN AND AZASH CONNECTION, OYIGBO, RIVERS STATE)

**BY**


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## CERTIFICATION

This is to certify that this project titled "Customer Relationship Management Information System for GSM Operators "was carried out by EZEAKU UCHENNA JOSEPHINE of Project Management Technology Department as a partial fulfillment of the requirement for the award of the M.sc Degree in Project Management Technology and is hereby presented for acceptance as a contribution to knowledge and learning .

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# DEDICATION

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# ABSTRACT

Customer Relationship Management (CRM) is an integrated approach to identifying, acquiring partnering and tracking customers to create value for the company and the customers. The aim of this work is to analyze the impact of CRM on Customers value and organizational operations with reference to GSM (Global System for Mobile Communication) operators. The objectives of this study includes the following; To examine Improvement in customers' relationship, to examine the company's progress against their goals, to determine how to provide customer with experience and quality service in order to move them ahead and to determine how to improve the Customers value. Definitional aspect of CRM was explored, leading to the identification of three alternatives perspectives and variations of CRM. The study process of this work is designed from the study of the integration parts of CRM which includes some CRM theories, various CRM architectures and CRM processes. This study involved the use of hypotheses to investigate CRM as applied to GSM operators (MTN and AZASH connection), a questionnaire was administered to a sampled population and the feedbacks from the respondents were analyzed to prove or disprove each of the hypotheses using ANOVA and t-test sample test analysis. From the findings there was significant improvement of organizational operations when CRM software are used/deployed. Also deployment of Customer Relationship Management (CRM) software has significantly improved customer's value. The study recommends therefore the need to improve customer relationship in order to boost broad based customer's confidence and hence encourage competitive trading in GSM market. Also for CRM implementation to be successful and thus achieve co-operate objectives, the right mix of CRM components and all the key factors strategy, leadership and integration need to be given due attention. There are basically 2 hypothesis which were used in this thesis work. They include, H0: There is no significant difference in the improvement of organizational operations when CRM software are used and H0: Deployment of Customer Relationship Management (CRM) software does not significantly improve customer's value.



**Keywords:** Customer Relationship Management, Management, Information System, GSM Operators.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background Information

In today's competitive environment, finding and keeping customers is more critical than ever. It is also less costly to retain existing customers than it is to find new ones. As a result, the concept of Customer Relationship Management (CRM) has been developed as a strategic process for businesses to approach customer relations systematically and efficiently.

CRM systems enable businesses to actively manage customer relations in an organized and strategic manner. In practice that means developing a company's methodologies, internal operations, and software and Internet capabilities to be able to better address customer needs and, as a result, make customer relationships more profitable.

Using a CRM system, a business can keep track of key customer information such as contacts, communications, accounts, buying histories and preferences, matching customer needs with product and service offerings. Companies can analyse the data to identify their best customers, enrich and individualize customer contact, manage marketing campaigns, reduce customer response times and serve wider geographical regions, similar to what is obtained in data mining.

A wide range of CRM systems exist from very simple to complex. A simple CRM system can be the use of a spreadsheet or contact management software to keep track of customer interaction. The most effective systems, however, require a comprehensive, company-wide effort to attract and retain customers through an integration of information, people, policies, processes and technology strategies. They require a cross-functional process as no single business unit can effectively execute CRM on its own.

In recent years, CRM technologies have become accessible and cost-effective

for even very small companies as technology solutions have become increasingly rich and prices have dropped. A range of options is now available through online, web-based applications etc.

Many smaller businesses deploy CRM technologies in steps, often starting with sales force automation or call centre software. As they use the software and grow, they begin to realize how other features can help their business succeed.

## 1.2 Problem Statement

Over the years, the CRM has been ineffective in various organizations. The major reason being that the organization has not obtained a clear picture of all its relationship with a customer and identify areas where better services are needed and also, there has been a relationship gap between customers and organization due to inability of organization to meet the demand of the customers when they are needed. In the light of the above problems, the management of various companies especially in Nigeria has set up customer's relationship management (CRM) which consists of the processes a company uses to track and organize its contacts with its current and prospective customers. As such, the following are problems that this thesis work looks to solve;

1. Why has CRM been ineffective in organization (especially in Nigeria)
2. Inability of organizations to obtain a clear picture of its relationship with its customers
3. Inability of the organization to meet with the demands of the customers when they are needed
4. Inability to identify areas where better services are needed.

Hence, this project is meant to answer the following question;

1. From the organizational perspective, does CRM improve organization relationship with their customers?
2. Can CRM help to track organizational progress against their goals?
3. Does CRM help provide quality service to customers?

## 1.3 Objectives of the Study

The major objective of this research work is to examine customer relationship movement information system for GSM Operators. The Specific objectives are:

i. To examine improvement in customers' relationship.
ii. To examine the companies progress against their goals
iii. To determine how to provide customer with experience and quality service in order to move them ahead.
iv. To determine how to improve the Customers value.

## 1.4 Research Hypothesis

The following hypothesis have been formulated to guide this research work

i. $HO_1$: There is no significant difference in the improvement of organizational operations when CRM softwares are used.

ii. $HO_2$: Deployment of Customer Relationship Management (CRM) software does not significantly improve customer's value.

## 1.5 Justification of the Study

As earlier mentioned, the justification of customer relationship management information system for GSM operators in Nigeria is to examine the improvement progress made so far in customer relationship management information system and its impact on both the customer and the

organization at large. This study will help to examine company progress against their goal for it will provide a clear picture on the effect that customer relationship information system may help in boosting the business by enabling a company obtain a completed picture of all of its relationship with a customer and identify areas where better services are needed. The result of this study will be of interest to all other network that are involved in business especially GSM operators like Zain, Glo etc. and for academic purpose. Besides, this study will be an eye opener to the organization in the sense that the company knows those services that their customer valued most.

## 1.6 Scope and Limitations of the Study

The scope of this study is GSM operators, with focus on MTN, which deploys and uses CRM and AZASH connect that does not use CRM.

Additionally, this research work was executed in Oyigbo, Rivers state within a three months field work period. Within this period, questionnaires were distributed, collected and analyzed.

This research work was accompanied by the following limitations.

- Limited sample population i.e. the questionnaire was distributed to a limited number of people to compare with our population statistics.
- Some respondent were not willing to fill questionnaire because of their tight schedule.
- Getting information from the organizations was a very difficult task since they do not want people to know their CRM strategy.

- Downloading information from organizations website was a very big task since many people are always using the site, so it makes the download slow and very taskful.
- Some of the libraries visited were not fully equipped consequently; there was the problem of incomplete data.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 The Conceptual Framework

A conceptual framework of this project provides the orientation to the study. It assist one to see how t he study contributes to the body of knowledge on Customer Relationship Management information system for GSM operators. A conceptual framework illustrates what you expect to find through your research. It defines the relevant variables for your study and maps out how they might relate to each other. It is a theory or the literature review of the project. The conceptual framework of the project is reviewed in below..

### 2.1.1 CRM (Customers Relationship Management)

From the outside, customers interacting with a company perceive the business as a single entity, despite often interacting with a number of employees in different roles and departments. CRM is a combination of policies, processes, and strategies implemented by an organization to unify its customer interactions and provide a means to track customer information.

It involves the use of technology in attracting new and profitable customers, while forming tighter bonds with existing ones. Customer relationship management (CRM) refers to the type of enterprise software that is designed to improve a company's interaction with its customers and thereby increase revenue from sales. CRM can also reduce the cost of supporting customers. CRM has the ability to move any transaction to the lowest cost channel possible and still satisfy customer needs. It can provide a complete view of all customer relationships, taking into account all points of customer contact and the different media through which customers interface with the enterprise. CRM systems give companies the ability to track customer interaction across a range of

channels, from e-mail to call centers. CRM can also provide the customer data required to conduct personalized marketing campaigns. Elements of such personalized marketing campaigns might include offers tailored to an individual visiting a company's Web site, dynamically served-up Web pages for different users, and personalized e-mail offers and announcements.

CRM helps companies learn as much as they can about their customers. Armed with this knowledge, companies can anticipate their customers' needs and keep them satisfied, resulting in higher revenues and lower costs. Data generated by CRM systems can be shared throughout an enterprise, allowing all departments or business units to coordinate their marketing efforts, including product development, advertising and promotion, and customer service.

Among the technologies included in a CRM environment are sales force automation (SFA), customer analytics, real-time marketing solutions, customer behavior modeling, and real-time decision-making. CRM technology is designed to allow the customer to view, access, and interact with the complete set of services offered by the enterprise. Different components of CRM relate to the different goals of customer acquisition, customer retention, and improved customer value. SFA and marketing applications are designed to help a company acquire more customers and convert prospects into customers. Data warehousing and analytical tools, along with customer service applications for call center and contact center management, help companies retain customers through improved communications and customer relations. CRM applications that can help improve customer value include marketing automation and campaign management software for cross-selling and up-selling. Data warehousing and analytical tools are also available to improve customer value.

CRM includes many aspects which relate directly to one another.

- Front office operations- Direct interaction with customers, e.g. face to face meetings, phone calls-mail, online services etc.
- Back office operations-Operations that ultimately affect the activities of the front office (e.g., billing, maintenance, planning, marketing, advertising, finance, manufacturing, etc.)
- Business relationships-Interaction with other companies and partners, such as suppliers/vendors and retail outlets/distributors, industry networks (lobbying groups, trade associations). This external network supports front and back office activities.
- Analysis- Key CRM data can be analyzed in order to plan target-marketing campaigns, conceive business strategies, and judge the success of CRM activities (e.g., market share, number and types of customers, revenue and profitability)

According to Inside CRM (2007) magazine Proponents of CRM software doesn't only allow more effective ways of managing customer relationships, but also more customer-centric ways of doing business. Executives often cite the need for the proper tools as a barrier to delivering the experience their customers expect. A 2009 study of over 860 corporate executives revealed only 30 % believes that their employees have tools and authority to solve customer problem, Destination CRM (2019).

Customer relationship management (CRM) consists of the processes a company uses to track and organize its contacts with its current and prospective customers.CRM software is used to support these processes; information about customers and customer interactions can be entered, stored and accessed by employees in different company departments. Typical CRM goals are to

improve services provided to customers, and to use customers contact information for targeted marketing.

While customer relationship management can be implemented without major investments in software, software is often necessary to explore the full benefits of a CRM strategy.

There are three parts of application architecture of CRM.

#### 2.1.1.1 Operational CRM

Operational CRM means supporting the so-called "front office" business processes, which include customer contact (sales, marketing and service). Tasks resulting from these processes are forwarded to employees responsible for them, as well as the information necessary for carrying out the tasks and interfaces to back-end applications are being provided and activities with customers are being documented for further reference.

#### 2.1.1.2 Analytical CRM

In analytical CRM, data gathered within operational CRM are analyzed to segment customers or to identify cross- and up-selling potential. Data collection and analysis is viewed as a continuing and iterative process. Ideally, business decisions are refined over time, based on feedback from earlier analysis and decisions. Business Intelligence offers some more functionality as separate application software. Relevant analytics capabilities are often interwoven into applications for sales, marketing, and service. These features can be complemented and augmented with links to separate, purpose-built applications for analytics and business intelligence. Sales analytics let companies monitor and understand client actions and preferences, through sales forecasting, data

quality, and dashboards that graphically display key performance indicators (KPIs).

According to Gartner (2012), Marketing applications generally come with predictive analytics to improve segmentation and targeting, and features for measuring the effectiveness of online, offline, and search marketing campaign and that Web analytics have evolved significantly from their starting point of merely tracking mouse clicks on Web sites. By evaluating "buy signals," marketers can see which prospects are most likely to transact and also identify those who are bogged down in a sales process and need assistance. SAP Insider (2007), reported that Marketing and finance personnel also use analytics to assess the value of multi-faceted programs as a whole and that These types of analytics are increasing in popularity as companies demand greater visibility into the performance of call centers and other support channels in order to correct problems before they affect satisfaction levels. Support-focused applications typically include dashboards similar to those for sales, plus capabilities to measure and analyze response times, service quality, agent performance, and the frequency of various issues.

### 2.1.1.3. Integrated/Collaborative CRM

Collaborative CRM facilitates interactions with customers through all channels (personal, letter, fax, phone, web, e-mail) and supports co-ordination of employee teams and channels. It is a solution that brings people, processes and data together so companies can better serve and retain their customers. The data/activities can be structured, unstructured, conversational, and or transactional in nature.

Departments within enterprises especially large enterprises-tend to function in their own little worlds .Dickie, (2016). Traditionally, inter-departmental

interaction and collaboration have been infrequent and rivalries not uncommon. More recently, the development and adoption of the tools and services has fostered greater fluidity and cooperation among sales, service, and marketing. This finds expression in the concept of collaborative systems which uses technology to build bridges between departments. For example, feedback from a technical support center can enlighten marketers about specific services and product features clients are asking for. Conversely, lack of integration can have negative consequences: system is not adopted and integrated among all departments; several sources might contact the same clients for an identical purpose. Owing to these factors, many of the top-rated and most popular products come as integrated suites.

Collaborative CRM provides the following benefits:

- Enables efficient productive customer interactions across all communications channels.
- Enables web collaboration to reduce customer service costs.
- Integrates call centers enabling multi-channel personal customer interaction.
- Integrates view of the customer while interaction at the transaction level.

*Other types and variations of CRM include the following:*

#### 2.1.1.4 Sales Force Automation

A Sales Force Automation (SFA) system provides an array of capabilities to streamline all phases of the sales process, minimizing the time that sales representatives need to spend on manual data entry and administration. This allows them to successfully pursue more clients in a shorter amount of time than would otherwise be possible. At the heart of SFA is a contact management system for tracking and recording every stage in the sales process for each

prospective client, from initial contact to final disposition. Many SFA applications also include insights into opportunities, territories, sales forecasts and workflow automation, quote generation, and product knowledge.

#### 2.1.1.5 Marketing

Systems for marketing (also known as marketing automation) help the enterprise identify and target its best clients and generate qualified leads for the sales team. A key marketing capability is tracking and measuring multichannel campaigns, including email, search, social media, and direct mail. Metrics monitored include clicks, responses, leads, deals, and revenue. Gartner, (2012)

#### 2.1.1.6 Customer Service and Support

According to SAP Insider, (2007) ,recognizing that service is an important differentiator, organizations are increasingly turning to technology platforms to help them improve their clients' experience while aiming to increase efficiency and minimize costs. Even so, a 2009 study revealed that only 39% of corporate executives believe their employees have the right tools and authority to solve client problems. He further explained that the core for these applications has been and still is comprehensive call center solutions, including such features as intelligent call routing, computer telephone integration (CTI), and escalation capabilities.

#### 2.1.1.7 Small Business

According to Gartner, ( 2012) , basic client service can be accomplished by a contact manager system, an integrated solution that lets organizations and individuals efficiently track and record interactions, including emails, documents, jobs, faxes, scheduling, and more. This kind of solution is gaining traction with even very small businesses, thanks to the ease and time savings of

handling client contact through a centralized application rather than several different pieces of software, each with its own data collection system, but in contrast these tools usually focus on accounts rather than individual contacts. They also generally include opportunity insight for tracking sales pipelines plus added functionality for marketing and service. As with larger enterprises, small businesses are finding value in online solutions, especially for mobile and telecommuting workers.

#### 2.1.1.8 Social CRM

Beginning in 2007, the rapid growth in social media and social networking forced CRM product companies to integrate "social" features into their traditional CRM systems Destination CRM (2019) .Some of the first features added are social network monitoring feeds (i.e. Twitter timeline), typically built into the system dashboard. Other emerging capabilities include messaging, sentiment analysis, and other analytics. Social media sites like Twitter and Face book are greatly amplifying the voice of people in the marketplace, and are predicted to have profound and far-reaching effects on the ways companies manage their clients. According to Destination CRM, (2019), this is because people are using these social media sites to share opinions and experiences on companies, products, and services.

#### 2.1.1.9 Sales Intelligence CRM

Sales Intelligence CRM is similar to Analytical CRM, but is intended as a more direct tool. Features include alerts sent to sales staff regarding:

- Cross-selling/Up-selling/Switch-selling opportunities
- Customer drift
- Sales performance

- Customer trends
- Customer margins
- Customer alignment

#### 2.1.1.10 Campaign Management CRM

Campaign management combines element of operational and Analytical CRM.

Campaign Management functions includes:

Target groups formed from the client base according to selected criteria

- Sending campaign-related material(e.g. e-mail, telephone, SMS, post)
- Tracking, storing, and analyzing campaign statistics, including tracking responses and analyzing trends

#### 2.1.1.11 Consumer Relationship CRM

Consumer relationship System (CRS) covers aspects of company's dealing with customers handled by consumer Affairs and Customer Relationship contact centers within a company. Representives handle in-bound contact from anonymous consumers and customers. Early warnings can be issued regarding product issues (e.g. item recalls) and current consumer sentiment can be tracked (voice of the Customer.

#### 2.1.1.12 Simple CRM

According to Destination CRM (2019). A relative new spin off of traditionally CRM model first appearing in 2006.At their core, CRM tools are designed to manage customer relationships. As described above there are countless supplemental features and capabilities. Simple CRM systems breakdown the traditional CRM system, to focus on the core values-managing contacts and

activities with the customers and prospects. These systems are designed to create the most value for immediate end user rather than the organization as a whole. Many times they focus on satisfying then needs of a particular marketplace niche, organizational unit, or type of user rather than an entire organization.

### 2.1.2 CRM Trends

#### 2.1.2.1 Analytical CRM

Analytical CRM is fast gaining ground as a hot trend in the CRM industry. Firms are now encouraging their analytical teams to work closer with their customers. They are endeavoring to see what sort of analysis actually matters to the customer through finding out what contributes to their highest satisfaction. The interest in this new functionality is easily one of the fastest growing trends in the industry. It is fast making CRM news as it offers ample room for growth in profitability.

#### 2.1.2.2 CRM goes Mobile

Another hot trend in the CRM industry is the "mobile" interest. CRM has currently gone mobile and is easily assessable almost anywhere. This new trend is fast gaining ground as the need for easy access is fundamental to any executive.

#### 2.1.2.3 Integrated approach for CRM

Companies no longer regard marketing, service and sales as separate entities. Instead they are more concerned with treating them with a holistic approach. CRM research shows that this integrated approach to CRM is fast gaining ground and CRM vendors need to ensure that their solutions pay ample heed to this fact. Vendors need to take this into account and ensure that their products

deliver an integrated CRM solution. SAP for example clearly indicates just how successful this trend has become..

#### 2.1.2.4 CRM and the Internet

CRM's newest forerun is into Internet Technology. This latest trend is fast gaining ground, for example Client Dynamics CRM software manages to integrate CRM with an Internet Search engine. What happens here is that the customers profile details are entered into the system and the search engine goes through corresponding articles and products that pertain to these profiles and gives it back to the organization that uses this information in its customer dealings.

#### 2.1.2.5 Vertical CRM

Vertical CRM solutions are one of the newest trends in the CRM industry. What happens here is that vendors focus on the fact that the needs of different organizations differ, therefore they try to accommodate these differences through customization, in order to fulfill the individual needs. For instance CRM software that specifically caters to the needs of the legal, financial, management and accounting sectors.

#### 2.1.2.6 Outsourcing CRM

Outsourcing CRM is yet another new trend gaining ground. Sales force leads the pack in this area. Despite initial hesitation in this area, firms now realize that it is a good bet. The lure in this area is the lower costs involved, contributing to overall profitability.

#### 2.1.2.7 Midmarket Trends

The newest trend in the midmarket is a desire to run licensed CRM applications, for example Sales force, Microsoft, Goldmine etc. The other trends taking shape

is that market leaders prefer to opt for partnerships rather than acquisitions. Most mid market players are going in for partnerships including SalesNet, Netsuite etc.

### 2.1.3 Customers Relationship Management (CRM) Components

There is a considerable body of literature concerning CRM, which covers a number of different components. CRM is organized as a series of events. These are clustered together according to types of action that constitute the extent of CRM in the context of this study. The extent of CRM comprises independent variables presented in the conceptual model. CRM comprises several components absolutely essential to the organization. Each of them offers something different yet its importance cannot be undermined.

Recent trends have enabled users to combine two or more components for better The Components of CRM are:

1. Customer prospecting,
2. Relations with customers,
3. Interactive management,
4. Understanding customer expectations,
5. Empowerment
6. Partnerships,
7. Personalization
8. People Management
9. Lead Management
10. Sales Force Automation
11. Customer Service
12. Marketing
13. Workflow Automation

14. Business Reporting
15. Analytics
16. Customers life value

These components are discussed below.

### 2.1.3.1 Customer Prospecting

Reinartz & Kumar (2013); Shultz,(2013) defined the term customer prospecting refers to all the various means employed in business to track, locate, and attract new customers. Many firms have developed databases that contain detailed interaction data on prospects as we ll as customers. Customer prospecting plays a key role at the beginning of the CRM process, Payne (2014).

### 2.1.3.2 Relationship with Customer

component of CRM concerns the extent to which firms initiate, develop, maintain, and improve relationships with other firms Gronroos, (2014); Heide, (2009); Jackson et al.,( 2014); Morgan et al., (2014); Nevin, (2015); Peterson, (2015); Reinartz & Kumar,( 2013).

### 2.1.3.3 Interactive Management

Interactive management is a key aspect of CRM functions, (2014). It comprises all actions designed to transform the prospective client who enters into contact with the business representatives into an active and effective customer Dufour & Maisonnas, (1997). It is conceptually based on reciprocity, which constitutes one important dimension of CRM Bitner, (1995); Gummesson, (2010); Nevin, (2015), and feedback is an important part of the core of interactive management Evans & Laskin, (2014). Indeed, Evans & Laskin (2014) consider customer

feedback as a key step of the CRM process and define it as the best way for firms to keep in touch with their customers perceptions.

### 2.1.3.4 Understanding Customer Expectations

This concept stresses the importance of identifying the customers desires and supplying to those customers products and services that meet their expectations. Power, (2018) .Szeinbach, Barnes, & Garner (2017) describe understanding customer expectations as the strategy adopted by firms to generate more knowledge of customer expectations and needs and to provide customers with the best services in order to win their loyalty.

### 2.1.3.5 Empowerment

Empowerment generally refers to the process a firm adopts to encourage and reward employees who exercise initiative, make valuable creative contributions, and do whatever is possible to help customers solve their problems (Evans & Laskin, (2014); Herzberg, (2003). Most business representatives prefer to deal with regular customers because they are easy to serve, they understand the firms preoccupations, and make only a few requests (Bendapudi & Leone, (2012); Chow & Holden, (2007).

### 2.1.3.6 Partnerships

Partnerships are created when suppliers work closely with customers and add desired services to their traditional product and service offerings (Evans & Laskin, (2014). Payne (2014) puts partnering at the extreme end of his loyalty scale, regarding it as an important step that usually leads to the development of a close and durable relationship between supplier and customer. Wilson (2015) has developed an integrated model devoted to the explanation of CRM process

phases. In this model, partner selection is considered to be the first step in the CRM process.

### 2.1.3.7 Personalization

Personalization refers to the extent to which a firm assigns one business representative to each customer and develops or prepares specific products for specific customers. Personalization is about selecting or filtering information for a company by using information about the customer profile (Schubert,( 2013). A major component of personalization is the distribution of customized mail to a customer or customization of the relationship between firm and customer Gronroos (2014).

### 2.1.3.8 Loyalty

The development of loyalty involves building and sustaining a relationship with a customer, which leads to the repeated purchase of products or services over a given period of time. A loyal customer base allows companies to devote their energies to other business matters Gefen, (2012); Rowley & Dawes, (2010). Customers can demonstrate their loyalty in several ways. They can choose to stay with a firm, whether this continuance is defined as a relationship or not, or they can increase the number of purchases, or they can do both Reinartz & Kumar, (2013); Rowley & Dawes,( 2010).

### 2.1.3.9 Work Flow Automation

Work flow processes include cutting costs and streamlining processes. It basically saves several people from doing the same job again and again. It reduces work and relieves work force of unnecessary tasks. It also includes things like routing out paperwork and filling out of forms that are essential. It also includes the integration of people and processes so that they work together

in harmony towards a common objective without any loss of time, money or effort.

#### 2.1.3.10 Business Reporting

This is nothing but being able to identify the exact position of your company at any given point of time. CRM plays a pivotal role in that it provides reports on the business. The advantages of this component include the ability to have this information at your instant access at any time. Accurate reports are also ensured .While forecasting is yet another feature it is also possible to actually export these reports to other systems. Historical data can also be saved to use for comparisons later on.

#### 2.1.3.11 Analytics

Analytics involve the study of data so that information can be used to study market trends. A complete trend study is made possible due to the ability to create charts, figures and diagrams using both historical and current data. For information like charts tables, log INS etc dashboards can also be used for increased visibility. This is an essential and pivotal part of CRM as it enables a study of data that is needed to make an estimate of the business condition at any given point.

#### 2.1.3.12 People Management

People Management is nothing but the effective use of people in the right place at the right time. It is imperative to adopt the right measures to ensure that the people skills match their job profiles. This is every large corporate requirement as well as small and medium industries. According to People Management an effective people strategy is first adopted, then the workforce is studied, skills and development analyzed and finally the required strategy needed for development and change is set down and implemented.

#### 2.1.3.13 Lead Management

Lead Management basically involves the tracking and distribution of sales leads. This benefits the sales, call centre and marketing industries as well. The work involves managing market campaigns, making customized forms, mailing lists etc. All this is done with a view to capture as many sales leads as possible so that there will be sales benefits. This is achieved through a comprehensive study of customer purchase patterns and the identification of potential sales leads.

#### 2.1.3.14 Sales Force Automation

Sales Force Automation is by far one of the most essential components of customer relationship management and also one of the first. Used by almost all organizations it is nothing but a software solution that includes forecasting, tracking potential interactions and processing of sales. The reason this is adopted as part of a CRM solution is because of the need to identify revenue possibilities.

#### 2.1.3.15 Customer Service

The customer service component in CRM is essential. This is because CRM focuses on collation of customer data, gathering information about their purchase patterns and provides this information to every department that requires it. Therefore vital departments like sales, marketing and personnel stand to gain in their knowledge of the customer. This enables the organization to provide suitable solutions to every customer and thus enhances customer retention and loyalty.

#### 2.1.3.16 Marketing

Marketing is nothing but the promotional activities that are involved in promoting a product either to a general public or to a specific group. Marketing

is different from sales and advertising in that one refers to act of selling itself while the other refers to the strategy involved. Customer Relationship Management facilitates the marketing function in that it increases the effectiveness of marketing by studying the potential targeted customers.

### 2.1.3.17 Customer Lifetime Value (CLV)

Customer value is defined by (Chi et al 2004) as customer perceived preference for, evaluation of, product attributes, attribute performances and consequences in terms of customer's goals and purposes. Customer's life value is one of the four components of Customer Relationship Management along with key account management, customer portfolio analysis and the relationship lifecycle. CLV is defined as the difference between what it costs to acquire, service, and retain a customer and the revenue generated from that customer over the customer lifecycle.

The main concept of CLV is the total customer portfolio, which reflects the total customer value generated for the firm in the form of enhanced profitability. Within this context, managers think in terms of long-term relationships instead of isolated transactions, while keeping in mind that customers are likely to alter their behavior due to competitive factors and/or change in their needs and wants.CLV is increasingly used as a key metric in customer-centric organizations for several reasons. Primarily it has a straightforward concept which is easy to understand. Undoubtedly, it makes good business sense to identify the most and least profitable customers and aim marketing efforts at the most valuable ones. By applying customer classification into high, medium, and low-value customers, CLV allows for product/service differentiation according to expected customer value. In that way, the Customer Relationship Management experts gain substantial insight into marketing decision-making and they are able to allocate scarce resources among selling efforts and service

levels. Finally, the calculation of CLV is straightforward (net present value of the future cash flows of a profitable customer).

Despite above mentioned advantages of CLV, few companies succeed to accurately calculate it due to shortcomings and limitations. Primarily, CLV requires the firm to grasp the long-term potential value of the customer, which insinuates projecting effectively the revenues and costs into the future. However, the statistical techniques required for the forecasting and modeling of future customer behavior in terms of spending rate & frequency are subject to statistical error and they are not so straightforward in their use. Moreover, useful CLV analysis requires five to ten years of transaction data. Hence, CLV analysis becomes inappropriate for new firms and new products where historical data do not exist and variations in customer behavior cannot be identified.

### 2.1.4 CRM Software/ Application

CRM software refers to a program to manage customer information the better. CRM software not only allows the organizing of customer information, but it software also provides the means to track sales leads from the time they are obtained until the sales are closed.

CRM applications are customer relationship management solutions for businesses. These software programs are used to store data and organize tasks in order to make a business run more smoothly and increase sales and profitability. CRM applications may stand alone or run in conjunction with other business software used by a company for contact and task management. With CRM applications, companies can create the positive, personal, and efficient experience that customers will return for time and again. CRM applications can

meet the needs of a small business and allow them to provide the quality service of a large corporation.

#### 2.1.4.1 Effect of CRM Applications on a Business

CRM applications can provide an easy way to manage customer information, track sales, and create effective outreach programs to the established customer base. Salespeople can boost their individual productivity and exceed their sales goals with the information held in the CRM applications database. Managers can track employee sales and manage necessary tasks within CRM applications, making everyday operations run more efficiently. Owners and corporate executives can access reports and information to create business plans and analyze product effectiveness and development, using the information recorded in the CRM applications software.

CRM applications increase sales by making many business processes more efficient. Using CRM applications, salespeople are able to do regular follow-ups with their clients, assuring customer satisfaction and top notch service. The data stored on each customer within CRM applications allows businesses to market new and existing products to the customers who will be most likely to buy. CRM applications can also increase a business' profitability by streamlining tasks and making the workload more efficient. The money saved by focusing marketing strategies to the most receptive audiences, due to the analysis in CRM applications can also help to boost business revenue.

#### 2.1.4.2 The Features of CRM Software/Applications

CRM software provides instant reporting capabilities. Good CRM allows all of the information obtained to be shared among both the sales force and the entire company. The right CRM software should combine all the elements of Customer Relationship Management, Sales Force Automation (SFA), and

Contact Management. This CRM allows sales managers and company officers to maintain complete control over sales operations and not miss any opportunities. Most CRM applications have a range of features that can be useful to businesses of all sizes and types. One of the most popular features of CRM applications is the extensive customer information database. In CRM applications, you can customize the databases to hold the most applicable information to best serve your own clients. CRM applications also serve as task managers within the organization. Managers can track progress and assign tasks to increase productivity, all from within the CRM applications. CRM applications can also perform some tasks independently, such as sending out scheduled emails and mass marketing emails, freeing up employees for other tasks. Also, CRM applications allow customized reports to be analyzed and printed at a moments notice. CRM applications provide a range of valuable features and functions to companies.

### 2.1.5 **Information Technology (IT) and CRM**

In terms of information technology (IT), CRM means an enterprise wide integration of technologies working together such as data ware house, web site intranet /extranet, phone support system, accounting, sales, marketing and production.Kotler (2006) assured that CRM uses IT to gather data, which can be used to develop information acquired to create a more personal interaction with the customers. In the long term, it produces a method of continuous analysis and refinement in order to enhance customer's life time value. Information Technology (IT) and CRM have three key elements, namely Customer Touch Points, Applications, and Data stores. Raisch (2001)

Customer Touch Points are vital since your business has a marketing orientation and focuses upon the customer and his or her current and future needs. This is the interface between your organization and its customers. For example you buy

a new car from a dealership, and you enter a showroom. The dealership is a contact point. You meet with a salesperson that demonstrates the car. The salesperson is a contact point.

- Applications are essentially the software and programmes that support the process. Incidentally, this is what some would call CRM - but we know better Applications serve Marketing (e.g. data mining software* and permission marketing**), Sales (e.g. monitoring Customer Touch Points), and Service (e.g. customer care).
- Data Mining is where an organization evaluates large Data Stores for patterns, or relationships between groups of individual (or segments). Applications present patterns in a format that can be used for marketing decision-making. Data Stores contain data on every aspect of the customer, and the Customer Life Cycle (CLC). For example, an organization keeps data on the products you buy, when you buy them, and where they are sent. Data is also kept on the web pages that you visit and the products that you consider stored. The data is analyzed using application.
- Permission marketing is where a customer elects to accept marketing material from an organization. It so called because marketers need your permission to market to you.

### 2.1.6 CRM Strategy

Choosing and implementing a system is a major undertaking. For enterprises of any appreciable size, a complete and detailed plan is required to obtain the funding, resources, and company-wide support that can make the initiative successful. Benefits must be defined, risks assessed, and cost quantified in three general areas:

- Processes: Though these systems have many technological components, business processes lie at its core. It can be seen as a more client-centric way of doing business, enabled by technology that consolidates and intelligently distributes pertinent information about clients, sales, marketing effectiveness, responsiveness, and market trends. Therefore, before choosing a technology platform, a company needs to analyze its business workflows and processes; some will likely need re-engineering to better serve the overall goal of winning and satisfying clients. Moreover, Destination CRM, (2019), explained that planners need to determine the types of client information that are most relevant, and how best to employ them.

- People: For an initiative to be effective, an organization must convince its staff that change is good and that the new technology and workflows will benefit employees as well as clients. Senior executives need to be strong and visible advocates who can clearly state and support the case for change. Collaboration, teamwork, and two-way communication should be encouraged across hierarchical boundaries, especially with respect to process improvement. Tech target(2009)

- Technology: In evaluating technology, key factors include alignment with the company's business process strategy and goals; the ability to deliver the right data to the right employees; and sufficient ease of use that users won't balk. Platform selection is best undertaken by a carefully chosen group of executives who understand the business processes to be automated as well as the various software issues. According to Destination CRM(2019),the process of creating a CRM strategy has three steps: Set the destination, audit the current situation, and map the journey to the destination.

  - Step 1 — Set the Destination: Managers are to examine the various definitions of CRM, creating their own to gain buy-in and cohesiveness from

those involved in the initiative. A vision for CRM that identifies why the organization wants the initiative and that defines its desired results should be established immediately. Teams that drive the initiative should be composed of three key roles: a sponsor, facilitator and project/program manager.

- Step 2 — Audit the Current Situation: Beginning with a full assessment of past CRM initiatives, staff and customers should know what they thought needed to be changed in order to understand what did/did not work. Also they should state that "assumptions, business case, and goals of past projects remain valid, even if the execution was not as successful as hoped." Staff should beware of shortcuts in information gathering. "Seek information from external sources first, and weight customer and consumer feedback highest."
- Step 3 — Map the Journey: Identify the steps to achieve the vision. Core value propositions for customers and motivating factors for customer loyalty should be classified. The company should be revalued on the potential of its customer base rather than on current revenue or profits. Processes and systems that can be altered rapidly and dynamically as individual customers move among segments should be built. Three to five top-line objectives for CRM initiatives should be established — more than five is considered unnecessary. The initiative should be communicated daily to sponsors and executives.

A CRM strategy cannot be developed in isolation. It must be relevant and linked to the overall corporate strategy, and it must be build on existing sales or marketing strategies that are already in use. CRM initiatives have eight aspects in common: vision, strategy, customer experience, organizational collaboration, processes, customer information, technology, and metrics. Achievement of some of these aspects is not enough to ensure CRM success, which hinges on covering all eight aspects.

### 2.1.7 CRM Implementation

CRM has two typical implementation methods: on-premise and on-demand/hosted. Each method has its advantages and disadvantages as described below.

On-premise CRM is the conventional approach in which the CRM application is installed on site, on your computers and in your data center, with your IT resources/staff managing it. This type of implementation provides you with more control over every aspect of your CRM, including service level agreements (SLAs), security and regulatory compliance requirements. It also lessens the chance that your company data will be inaccessible due to a loss of connectivity with your service provider.

On-premise CRM is appropriate for:

- Companies seeking to implement highly customized customer-management practices
- Companies that need specialized data structures
- Companies with complex or real-time integration requirements
- Companies with available in-house IT resources and support systems
- Companies who can afford the up-front capital investment and fixed costs
- Companies who deal with sensitive data that don't want other parties to see.

The on-demand CRM solution is designed to minimize the risks associated with implementing

CRM.On-demand solutions represent some of the most reliable and scalable applications on the market based on years of internet application development. To achieve expected client results in on-demand

implementation, a service provider must maintain a robust network environment with extensive data redundancy, application monitoring and pre- and post-production quality assurance procedures. Moreover, a multi-tiered operations team is needed to employ industry best practices for disaster recovery and operations support, ensuring quick resolution of client issues including:

• Risk-sensitive disaster recovery systems and processes
• Tiered software quality assurance process
• Co-location and redundancy
• Fault-tolerant system components
• 24x7 application monitoring and technical support.

On-demand/hosted CRM is appropriate for:

- Customers seeking to implement standard processes from a variety of industries and companies
- Companies that are able to use standard data structures
- Companies with more basic integration requirements
- Companies with limited technical resources and support personnel
- Companies seeking variable pricing and lower up-front costs
- Companies dealing with non-proprietary data

#### 2.1.7.1 Implementation Issues

According to Lior, Arussy (20015), dramatic increases in revenue, higher rates of client satisfaction, and significant savings in operating costs are some of the benefits to an enterprise. Proponents emphasize that technology should be implemented only in the context of careful strategic and operational planning.

Implementations almost invariably fall short when one or more facets of this prescription are ignored:

- Poor planning: Initiatives can easily fail when efforts are limited to choosing and deploying software, without an accompanying rationale, context, and support for the workforce , Gartner, (2012) .In other instances, enterprises simply automate flawed client-facing processes rather than redesign them according to best practices.
- Poor integration: For many companies, integrations are piecemeal initiatives that address a glaring need: improving a particular client-facing process or two or automating a favored sales or client support channel. According to SAP white paper (2003), such "point solutions" offer little or no integration or alignment with a company's overall strategy. They offer a less than complete client view and often lead to unsatisfactory user experiences.
- Toward a solution: overcoming low mentality, experts advise organizations to recognize the immense value of integrating their client-facing operations. In this view, internally-focused, department-centric views should be discarded in favor of reorienting processes toward information-sharing across marketing, sales, and service (SAP white paper 2003), for example, sales representatives need to know about current issues and relevant marketing promotions before attempting to cross-sell to a specific client. According to SAP white paper (2003), marketing staff should be able to leverage client information from sales and service to better target campaigns and offers, also support agents require quick and complete access to a client's sales and service history.

#### 2.1.7.2 Adoption Issues

Historically, the landscape is littered with instances of low adoption rates. In 2012, a Gartner report estimated that more than $1 billion had been spent on software that wasn't being used. More recent research indicates that the problem, while perhaps less severe, is a long way from being solved. According to a CSO Insights less than 40 percent of 1,275 participating companies had end-user adoption rates above 90 percent Dickie, (2016)

In a 2007 survey from the U.K., four-fifths of senior executives reported that their biggest challenge is getting their staff to use the systems they have installed. Further, 43 percent of respondents said they use less than half the functionality of their existing system; 72 percent indicated they'd trade functionality for ease of use; 51 percent cited data synchronization as a major issue; and 67 percent said that finding time to evaluate systems was a major problem. Specialists offer these recommendations Dickie,(2016) ,for boosting adoptions rates and coaxing users need to blend these tools into their daily workflow:

- Choose a system that's easy to use: All solutions are not created equal. Some vendors offer more user-friendly applications than others, and simplicity should be as important a decision factor as functionality.
- Choose the right capabilities: Employees need to know that time invested in learning and usage will yield personal advantages. If not, they will work around or ignore the system.
- Provide training: Changing the way people work is no small task, and help is usually a requirement. Even with today's more usable systems, many staffers still need assistance with learning and adoption. Provide

consistent support. Prompt, expert, always-accessible technical support goes a long way to facilitate use and confidence with a new system.

### 2.1.8 CRM Challenges

Tools and workflows can be complex to implement, especially for large enterprises. Previously these tools were generally limited to contact management: monitoring and recording interactions and communications. Software solutions then expanded to embrace deal tracking, territories, opportunities, and at the sales pipeline itself. Next came the advent of tools for other client-facing business functions, as described below. These technologies have been, and still are, offered as on-premises software that companies purchase and run on their own IT infrastructure. Perhaps the most notable trend has been the growth of tools delivered via the Web, also known as cloud computing and software as a service (SaaS). In contrast with traditional on-premises software, cloud-computing applications are sold by subscription, accessed via a secure Internet connection, and displayed on a Web browser. Companies don't incur the initial capital expense of purchasing software; neither must they buy and maintain IT hardware to run it on. Despite all this, many companies are still not fully leveraging these tools and services to align marketing, sales, and service to best serve the enterprise. SAP white paper (2003) often, implementations are fragmented; isolated initiatives by individual departments to address their own needs. Systems that start disunited usually stay that way: Siloed thinking and decision processes frequently lead to separate and incompatible systems, and dysfunctional processes.

### 2.1.9 Management Information System (MIS)

A management information system (MIS) is a subset of the overall internal controls of a business covering the application of people, documents,

technologies, and procedures by management accountants to solve business problems such as costing a product, service or a business-wide strategy. Management information systems are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization. [1] Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support of human decision making, e.g. Decision Support Systems, Expert systems, and Executive information systems .B. O'Brien, J (2009).

It has been described as, "MIS 'lives' in the space that intersects technology and business. MIS combines tech with business to get people the information they need to do their jobs better/faster/smarter. Information is the lifeblood of all organizations - now more than ever. MIS professionals work as systems analysts, project managers, systems administrators, etc., communicating directly with staff and management across the organization." (http://www.sjsu.edu/isystems).At the start, in businesses and other organizations, internal reporting was made manually and only periodically, as a by-product of the accounting system and with some additional statistic(s), and gave limited and delayed information on management performance. Previously, data had to be separated individually by the people as per the requirement and necessity of the organization. Later, data and information was distinguished and instead of the collection of mass of data, important and to the point on that data that is needed by the organization and was stored.

In their infancy, business computers were used for the practical business of computing the payroll and keeping track of accounts payable and accounts receivable. As applications were developed that provided managers with information about sales, inventories, and other data that would help in managing the enterprise, the term "MIS" arose to describe these kinds of applications.

Kotler(2006) define 'MIS' as a planned system of the collecting, processing,

storing and disseminating data in the form of information needed to carry out the functions of management. In a way it is a documented report of the activities those were planned and executed. According to Kotler "A marketing information system consists of people, equipment, and procedures to gather, sort, analyze, evaluate, and distribute needed, timely, and accurate information to marketing decision makers.The terms MIS and information system are often confused. Information systems include systems that are not intended for decision making. The area of study called MIS is sometimes referred to, in a restrictive sense, as information technology management. That area of study should not be confused with computer science. IT service management is a practitioner-focused discipline. MIS has also some differences with Enterprise Resource Planning (ERP) as ERP incorporates elements that are not necessarily focused on decision support.

### 2.1.10 GSM (Global System for Mobile Communication)

This is a digital mobile telephony system that is widely used in Europe and other parts of the world. GSM uses a variation of time division multiple access (TDMA) and is the most widely used of the three digital wireless telephony technologies (TDMA, GSM, and CDMA). GSM digitizes and compresses data, then sends it down a channel with two other streams of user data, each in its own time slot. It operates at either the 900 MHz or 1800 MHz frequency band.

Mobile services based on GSM technology were first launched in Finland in 1991. Today, more than 690 mobile networks provide GSM services across 213 countries and GSM represents 82.4% of all global mobile connections. According to GSM World, there are now more than 2 billion GSM mobile phone users worldwide. GSM World references China as "the largest single GSM market, with more than 370 million users, followed by Russia with 145 million, India with 83 million and the USA with 78 million users."

Since many GSM network operators have roaming agreements with foreign operators, users can often continue to use their mobile phones when they travel to other countries. SIM cards (Subscriber Identity Module) holding home network access configurations may be switched to those will meter local access, significantly reducing roaming costs while experiencing no reductions in service.

### 2.1.11 MTN

MTN Nigeria is part of the MTN Group, Africa's leading cellular telecommunications company. On May 16, 2001, MTN became the first GSM network to make a call following the globally lauded Nigerian GSM auction conducted by the Nigerian Communications Commission earlier in the year. Thereafter the company launched full commercial operations beginning with Lagos, Abuja and Port Harcourt.

MTN paid $285m for one of four GSM licenses in Nigeria in January 2001. Since launch in August 2001, MTN has steadily deployed its services across Nigeria. It now provides services in 223 cities and towns, more than 10,000 villages and communities and a growing number of highways across the country, spanning the 36 states of the Nigeria and the Federal Capital Territory, Abuja. Many of these villages and communities are being connected to the world of telecommunications for the first time ever. The company subsists on the core brand values of leadership, relationship, integrity, innovation and "can-do". It prides itself on its ability to make the impossible possible, connecting people with friends, family and opportunities. In its resolve to enhance quality customer service, MTN Nigeria has also introduced a self-help toll-free 181 customer-care line through which subscribers can resolve their frequently asked questions free of charge.

MTN's overriding mission is to be a catalyst for Nigeria's economic growth and development, helping to unleash Nigeria's strong developmental potential not only through the provision of world class communications but also through innovative and sustainable corporate social responsibility initiatives.

### 2.1.11 AZASH Connection

AZASH connection is an individually owned GSM operating company. It was opened in Dec. 2008 by group of men who has business at heart.AZASH connection has grown rapidly that they have a lot of branches with Oyigbo as their head office. AZASH connection does not deploy or integrated CRM software but uses a cultivated model for their IT procurement and management; it created a way for conversations with customers and conversations among customers to be integrated into its help desk environment via the Forums area. Forum categories, which can be customized, are all listed and documented on pages of books.

Because AZASH connection tend to deal with highly sensitive customer data (sales records, financial data) ,they tends to be very strict in order to get around mandates concerning privacy and security. Every work is done manually and kept in files.

Staff working at AZASH connection have strong "personalities" and often bring their own process and tools to the job – there is no person "appointed" with the responsibility to plan, advocate, lead a company-wide solution. It's sometimes challenging to develop agreement among the staff. The only advocate is the owner-manager who is to often busy tackling the "fire of the day" i.e. priorities and decisions are based on day-to-day tactics and not strategy.

## 2.2 Theoretical Framework

Customer Relationship Management (CRM) has become one of the most dynamic technology topics of the millennium. According to Chen and Popovich (2003), CRM is not a concept that is really new but rather due to current development and advances in information and enterprise software technology, it has assumed practical importance. The root of CRM is relationship marketing, which has the objective of improving the long-term profitability of customers by moving away from product-centric marketing.

Bose (2014) noted that CRM was invented because the customers differ in their preferences and purchasing habits. If all customers were alike, there will be little need for CRM. As a result, understanding customer drivers and customer profitability, firms can better tailor their offerings to maximize the overall value of their customer portfolio (Chen and Popovich 2003). The attention CRM is currently receiving across businesses is due to the fact that the marketing environment of today is highly saturated and more competitive (Chou et al, 2002) . According to Greenberg (2014), CRM generally is an enterprise-focused endeavor encompassing all departments in a business. He further explains that, in addition to customer service, CRM would also include, manufacturing, product testing, assembling as well as purchasing, and billing, and human resource, marketing, sales and engineering. Chen and Popovich (2003) argued that CRM is a complicated application which mines customer data, which has been retrieved from all the touch points of the customer, which then creates and enable the organization to have complete view of the customers. The result is that firms are able to uncover and determine the right type of customers and predicting trend of their future purchases. CRM is also defined as an all embracing approach that seamlessly integrates sales, customer service, marketing, field support and other functions that touch customers (Chou et al, 2002) . They further stated that CRM is a notion regarding how an organization

can keep their most profitable customers and at the same time reduce cost, increase in values of interaction which then leads to high profits.

However, Bang Nguyen and Simkin, L. (2009), stated that there are paradoxes and pitfalls in implementing CRM and in effort to build buyer- seller relationship. They further stated that business culture will be affected and there will be lack of commitment or resistance to cultural change from people within the company., R.L and Swan J.E (2019), also stated that the misinterpretation of CRM have resulted in depletion of customer trust customers perceiving themselves as being exploited by firms' unfair CRM schemes. They Further explain that their lack of fairness, trust and transparency, so that CRM schemes may pose a significant threat .Again they stated that favoritism towards profitable customers, dynamic pricing and hidden surcharges have all been associated with Customer Relationship Management (CRM) and its schemes.

This project work will actually help to prove or disprove if Customer Relationship Management information System has been an effective tool for organizations or not.

## 2.3 Empirical Review

Around the world, many studies have been conducted to determine the factors affecting organizational performance on several types of organizations. Accordingly, previous studies are reviewed in levels in order to determine factors affecting organizational performance.
Samson Nwankwo and Sunday Stephen Ajemunigbohun (2013) in his study made an empirical assessment from Nigeria's Insurance Industry. The purpose of this study was to draw the attention of insurance practitioners in Nigeria to interrelationships that exist among CRM, customer retention and value creation. The researchers evaluated the relationship that exist between CRM and customer retention; and also ascertained if value creation was in any way

extended to insuring populace in Nigeria.
The study employed cross-sectional survey design and the study was conducted within Lagos metropolis from October, 2012 to February, 2013. The study employed stratified random sampling technique and thus, gathered data through the use of structured questionnaire. The sample population consisted of 58 respondents made up of marketing managers and underwriting managers drawn from 35 insurance companies which were randomly selected from the directory of member companies. The statistical instruments employed for this study were Simple linear regression and Kolmogorov-smirnov test. Two hypotheses were tested in this study.
The study found that CRM positively influences customer retention in the Nigeria's Insurance company/organizations, and thus helps create values for insuring populace in Nigeria. Hence the study evidenced interlink between various constructs understudied.

Revenio Jalagat (2016) evaluate the extent of CRM application in Bank Muscat, Sultanate of Ornan. The study Specifically sought to address the following questions:
(1) What is the role of Customer Relationship Management factors on service quality provided by Bank Muscat?
(2) What are the different tools and techniques Bank Muscat uses in order to practice relationship management and how they use it?
(3) How customer relationship management tools and techniques can contribute customer loyalty, value and customer retention?
The research utilized the mixed method research that employs both the quantitative and qualitative approach. The SPSS package was used to analyze the demographic profile of the respondents and the role of CRM in assessing the service quality provided by Bank Muscat with the use of Likert Scale. The other

part of this research dealt with the qualitative aspect with the use of interview to the customer respondents and the 3 Bank Muscat staffs. The data gathering was made to the 80 customer respondents and three staff respondents. The findings of the study showed that CRM positively impact the service quality and thereby improve organizational operation. The role of CRM to service quality the findings showed the following factors Based on the findings and conclusions of the study, it was recommended that the top management should support the maintenance of CRM system and increase the rate of responsiveness of the management to the concerns of the customers in order to improve Customers relationship and value. Also that they management should track and check the company's progress against their goals in order to provide experience and quality services to the customers,

### 2.3.1 Research Gap

Explicitly, the study has unveiled some silent literatures that have some degree of relevance to the matter under study. These literatures have concentrated mainly on general issues on Customer Relationship Management, with little or no emphasis on the impact on organizational performance. This study therefore intends to cover this gap by examining in details further on the impact of Customer Relationship Management on organizational performance. These reviews were quite helpful to identify the gap and it provides an insight to carry out the study in the right perspective. Organizational performance comprises the actual output or results of an organization as measured against its intended outputs (or goals and objectives). According to Richard et al. (2009) organizational performance encompasses three specific areas of firm outcomes:
a) Financial performance (profits, return on assets, return on investment, etc.);
b) Product market performance (sales, market share, etc.); and
c) Shareholder return (total shareholder return, economic value added, customer

service, etc.).Specialists in many fields are concerned with organizational performance including strategic planners, operations, finance, legal, and organizational development. In recent years, many organizations have attempted to manage organizational performance using the balanced scorecard methodology where performance is tracked and measured in multiple dimensions such as: Financial performance (e.g. shareholder return), Customer service, Social responsibility (e.g. corporate citizenship, community outreach), Employee stewardship, and Profit maximization.

### 2.3.2 SUMMARY OF THE REVIEW

This chapter has examined the knowledge base on which the study was developed. The origin and definitions customer relationship management were reviewed. Key literature review papers about customer relationship management have been also referenced throughout the sections.

The key area of customer relationship management and how it improve to customer relationship and organizational performance is an area that is growing in business and organizational research. This paper examined customer relationship management in the context of customer service quality and organizational performance. The various parts that were examined in this Project includes: what customer relationship management is, types of customer relationship management, what customer service entails, how it can be improved upon and how customer relationship management can be implemented. Learning and managing customers is what this whole customer relationship management topic is all about. The customers tell the organization what to do in order to manage and keep them. The strategy is for the organizations to learn how to listen, manage and retain customers in order to improve upon their performance.

# CHAPTER THREE

# METHODOLOGY

## 3.1 Introduction

According to the Encarta dictionaries research is an organized study, a methodological investigation into a subject in order to discover facts, to establish or reverse a theory, or to discover a plan of action based on facts discovered.

Furthermore, Young (2017) pointed out that social research is a scientific undertaking which by means of local and systematized techniques aim to:

(1) Discover new facts or verify and test old facts
(2) Develop new scientific tools, concepts and theories which would facilitate reliable and valid study of human behavior
(3) Analyze their sequence, inter-relationship and casual explanations

This research methodologically investigates into the subject, security in networks for connected nodes and process control systems in order to discover best plans in terms of best security models and discover flaws inherent in some popular existing frameworks. This chapter presents the research methodology to achieve this under the following sub-headings: Research Design; Sample and Sampling Techniques; Instrumentation (development, Validation and reliability of Instruments) Data Collection Procedure, and Data Analysis Techniques.

## 3.2 Research Design

Research design refers to the procedures, methods and actions employed to develop a research (Eboh 2000).

The research design the researcher used here is instrumentation. It has to do with the development and validation of the instrument used for data collection for this study.

### 3.3 Population of the Study

The population of the study refers to the sum total of individuals, objects, and events etc. that possess characteristics of particular interest to the study, and fall with the geographic and demographic limits of this study.

The population of study is the entire staff and adjunct staff of MTN and AZASH CONNECT in Oyigbo. The size of this population is 140.

### 3.4 Population Sample Size

The sample size specifies the characteristics of the participants in a study (Creswell, 2019). The issue of sample size should be considered in the light of the nature of the study and the statistical techniques used to analyze the data, as the extent to which observations could be generalized to the larger target population is a direct function of the degree of statistical inference that can be made from the data presented by the sample. It is recommended for validation purposes that the survey be administered to a relatively large sample (approximately 100 subjects, depending on the number of assessments used) (Babbie & Mouton, 2010). For the purpose of this study, the sample size was distributed as follows, based on the calculation below;

Table 3.1: Sample Size Distribution

| Network | Number of Staff and Adjunct Staff |
|---|---|
| MTN | 52 |

| | |
|---|---|
| AZASH CONNECT | 52 |

With a 5 percent error using the Taro Yamane Formulae for the determination of the sample size, the needed sample size from 140 subjects was computed. The stratified sample of the 140 staff were calculated thus;

n = sample size

e = sampling error

N = population

$$n = \frac{N}{1 + Ne^2} = \frac{140}{1 + 140(.05)^2} = 103.7 \text{ approx } 104$$

### 3.5 Instrumentation

One instrument, questionnaire was used to collect data in this study. It was developed by this researcher as part of the study. It is a four item questionnaire, designed to elicit information on the study.

Section A was aimed at eliciting Personal Information on the respondent

Section B was aimed at establishing whether CRM was deployed or not and how many years it has been in operations

Section C was aimed at getting information on the level of perception of business improvement based on a five point scale.

#### 3.5.1 Development of the Instrument

The first step in the development of the questionnaire was the review of literature on the number of CRM models and methods. The benefits and de merits.

### 3.5.2 Validation of the Instrument

To determine the validation of the questionnaire, the instrument was sent to fifty five experts randomly selected from the networking environment. The respondents were required to respond to the following questions;

1. How does the questionnaire look to you as a reader?

A. Not in the least like a questionnaire on Customer Relationship Management

B. Not quite like a questionnaire on Customer Relationship Management

C. Looks neither like nor like a questionnaire on Customer Relationship Management

D. Looks a little like a questionnaire on Customer Relationship Management

E. Looks very much like a questionnaire on Customer Relationship Management

2. How appropriate does this questionnaire look for any Customer Relationship Management expert to understand?

A. Grossly inappropriate

B. Inappropriate

C. Borderline

D. Appropriate

E. Very appropriate

A total of 49 of the prospective respondents returned their responses. This number which translates to 89% rate was considered high.

The responses were converted to scores on a 5-point (Likert-type) scale that ranged from 1 to 5 with higher scores depicting higher levels of validity. The mean rating on question 1 was 4.86 with a standard deviation of .456, a minimum of 3 and a maximum rating of 5. On question 2, the mean rating 4.33 with a standard deviation of .654, a minimum of 4 and a maximum of 5. These means suggest that the face validity of the instrument is quite high (Okonkwo, 1 2012).

### 3.5.3 Administration of the Instrument

The copies of the instrument were mailed to the prospective subjects. The instrument was made as simple and as explicit as possible to compensate for personal absence of the researcher. Also, the researchers phone number and email address was added to the questionnaire in case of any clarifications sought by the subjects. Three hundred questionnaires were mailed out two hundred and thirteen returned their questionnaires. Out of these, fifty- two questionnaires were randomly selected for each security model so that the number N, of subjects for analysis for each model will be equal therefore the total sample used was one hundred and four subjects

## 3.6 Methods and Techniques of Data Analysis

The procedure for testing for the equality of three or more means is provided by a statistical technique known as the analysis of variance (ANOVA). This is the technique employed to analyze the first hypothesis. This method is based on the F- distribution (Nworuh, 2001). One-way analysis of variance involves one independent variable (referred as the factor), which has a number of different levels.

The analysis of variance compares the variability of these rating, between the different groups, an F ratio is calculated which reflects the variance between the groups. A significant F ratio, indicates that we can reject the null hypothesis

which states that the means are equal. It does not however tell us which of the groups differ. For this we have to conduct a Post-hoc test (Pallant, 2014). The mathematical model for the analysis of variance and the ANOVA table result is shown below:

Table 3.2 analysis of variance table.

| Source of variation | Sum of Square | D. F. Degree of Freedom | Mean Square | F-Ratio |
|---|---|---|---|---|
| Between groups | SSB | K-1 | SSB/K1=MSB | MSB |
| Within groups | SSW or SSE | n-k | SSE/NK=MSE Or MSW | MSE |
| Total | SST | N - 1 | - | - |

In Null hypothesis, $u = u^2 = u^3$

I.e. we regard random among

$X_1$, $X_2$, and $X_3$ ----------$X_n$

The following will be used in calculating the hypothesis.

DFB =Degrees of freedom within the sample

MSB = mean Square between the samples

MSW = Mean square within groups samples

SSW or SSE = sum of square within group samples.

SSE=SST-SSB

DFB = degree of freedom between samples and is given as K – I

DFW = Degree of freedom within groups and is as dfw = NT – K

NT = Total number of subjects

K = number of Columns

i.e. = 0.05 degree of freedom will be used.

The following assumptions must be satisfied for the ANOVA test to be valid.

- Sampling from each of the population must be independent and random.
- The populations must be normally distributed, with means X1 (not necessary equal), and equal variations. For the second hypothesis we used the T-test. The t-test is used to compare the values of the means from two samples and test whether it is likely that the samples are from populations having different mean values. A t-test can be used to compare two means or proportions, it also assume that the variances of the two populations are equal.

# CHAPTER FOUR

# RESULTS AND DISCUSSION

This chapter analyses the data collated from the field, including an interpretation and discussion of the findings. The data was analyzed using appropriate statistical tools, including the Statistical Package for Social Science (SPSS, ver. 24). The analysis involved using descriptive statistics such as tables, graph, means, and standard deviations. At the end of the presentations, a summary of the results obtained was made.

The result of data analysis are presented in Tables 4.1 and 4.5.It is worthy of note that only primary data were employed in carrying out the tests, supported by analytical tools as graph, means  etc where applicable: due to the nature of hypotheses, Analysis of Variance (ANOVA ) and t-test were employed to test the two hypotheses.

## 4.1 Descriptive Analysis

The data were sourced primarily from these GSM operators;

1. MTN: the GSM operators that deploys and uses CRM

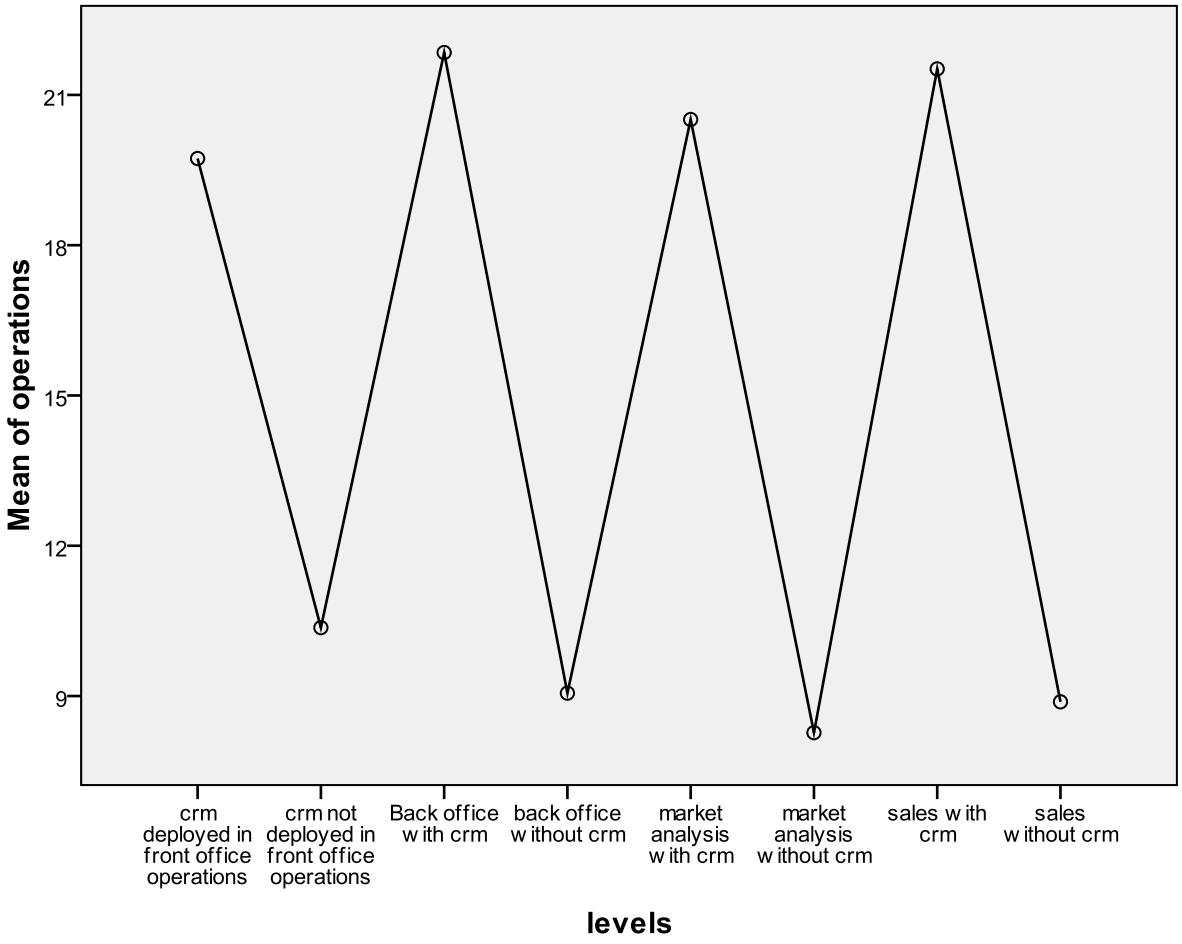
2. AZASH Connection: the GSM operators that do not deploy CRM. The description of the data for these analyses are presented in Table 4.1.

Table 4.1: Descriptive Table

| Operations | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| CRM deployed in front office operations | 52 | 19.73 | 2.377 | .330 | 19.07 | 20.39 | 14 | 24 |
| CRM not deployed in front office operations | 52 | 10.37 | 2.715 | .377 | 9.61 | 11.12 | 6 | 19 |
| Back office with CRM | 52 | 21.85 | 1.934 | .268 | 21.31 | 22.38 | 17 | 25 |
| back office without CRM | 52 | 9.06 | 2.118 | .294 | 8.47 | 9.65 | 5 | 16 |
| market analysis with CRM | 52 | 20.51 | 1.728 | .237 | 20.03 | 20.99 | 17 | 24 |
| market analysis without CRM | 52 | 8.27 | 1.622 | .225 | 7.82 | 8.72 | 6 | 12 |
| sales with CRM | 52 | 21.52 | 1.788 | .248 | 21.02 | 22.02 | 17 | 24 |
| sales without CRM | 52 | 8.88 | 1.653 | .229 | 8.42 | 9.34 | 7 | 13 |
| Total | 417 | 15.04 | 6.269 | .307 | 14.43 | 15.64 | 5 | 25 |

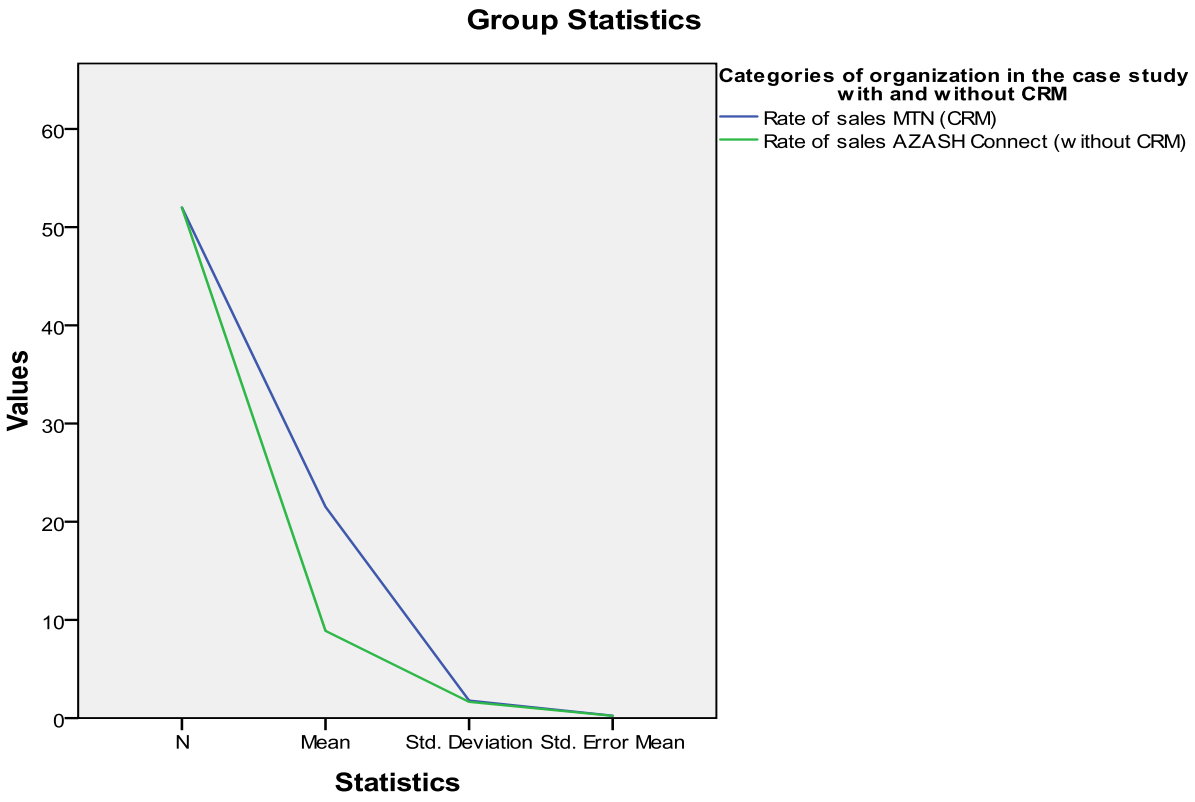
The descriptive table highlight the mean difference in various departments where is applied and not applied.

Graph 1: mean of operations graph




The mean of operations graph showing organization ( MTN) that deploys CRM in the operations ( Sales ,Marketing, Front office and Back office ) and the organization AZAH Connection which does not deploy CRM.

Graph4.2: Showing Group Statistics and customer's Value




Graph 1.2 shows the rate of sales in the two organizations understudy. Note that the higher the sale of a product depletes the value people attach to such product. The mean values reveals the organization that create more customers value .

Table 4.2: Test of Homogeneity of Variances

The result of test of homogeneity is presented in table 4.2

| Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|
| 3.920 | 4 | 99 | .000 |

Table 4.3: Test of Analysis of Variance (ANOVA )

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 14672.811 | 4 | 2096.116 | 511.629 | .000 |
| Within Groups | 1675.649 | 99 | 4.097 | | |
| Total | 16348.460 | 103 | | | |

SOURCE: Extract from result of computer analysis with Window SPSS

The ANOVA result from the table 4.3 revealed that the lower degree of freedom (k-1; 5-1=4) and the upper degree of freedom (N-K; 104-5=99), for 95% confidence level. Also the graph 1 in appendix also revealed that the comparative examination of the mean of operation of the two GSM operators (MTN and AZASH connection),The mean of MTN deploying CRM since to have a a high positive impact than the Mean of operation of AZASH connection that does not deploy or use CRM.

Table 4.4: T-Test Analysis (Group Statistics)

| | Categories of organization in the case study with and without CRM | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Rate of sales | MTN (CRM) | 52 | 21.52 | 1.788 | .248 |
| | AZASH Connect (without CRM) | 52 | 8.88 | 1.653 | .229 |

A T- test is used to compare if there is a significant difference between the means of the two groups of categories of organization in the case study.

Table 4.5: Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | T | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Rate of sales | Equal variances assumed | .929 | .337 | 37.423 | 102 | .000 | 12.635 | .338 | 11.965 | 13.304 |
| | 6Equal variances not assumed | | | 37.423 | 101.378 | .000 | 12.635 | .338 | 11.965 | 13.304 |

Independent sample T-test in the Table 5.1.5 is also used to compare the means of the two groups/ orgamization under study.

## 4.2 Test of Hypothesis

i. $Ho_1$: there is no significant difference in the improvement of organizational operations when CRM is used

**Decision Rule**

If the calculated F-ratio is greater than the tabulated F-ratio or critical F-ratio, we reject H0 and accept HA. The result analyses show that F-ratio calculated is

(511.629) >F-ratio tabulated (4, 99), also in the table ANOVA there is a statistically significant difference at the p<.05 in the scores p=.000 i.e. the significant is 0.00, therefore we reject the null hypothesis which says:

Ho: there is no significant difference in the improvement of organizational operations when CRM is used

And accept HA which says:

HA: there are significant differences in the improvement of organizational operations when CRM is used.

ii. $Ho_2$: Deployment of Customer Relationship Management software does not significantly improve customer's value

The value the customer derives from a product is directly proportional to the sales of the product.

**Decision Rule**

To analyze the second hypothesis we used a T- test to check if there is a significant difference between the volume of sales recorded on the average between the organization that deployed CRM and the organization that did not deploy CRM and the result as shown in the Tables 4.4

Looking at the Table 4.4 and the Graph 2, MTN which deployed CRM has the following sales values: **(M=21.52, Std=1.788)** Azash connect without CRM has the following values: **(M=8.88, Std=1.6530)** this shows quite a large difference in the sales mean of the two organizations.

To further confirm whether the difference in mean is significant we look at the Table 4.4, independent sample test, taking the row equal variances not assumed, and looking at the column sig (2-tailed), the p value of 0.00, confirms that there is a significant difference between the two means therefore we reject H0 and

choose HA that says: Deployment of Customer Relationship Management software significantly improves customer's value.

**Discussion of Findings**

Based on the findings relating to the hypothetical submissions, the following observations were made: The result obtained in hypothesis one shows clearly that CRM has a significant improvement in organizational when CRM is deployed as the calculated F-ratio is (511.629) >F-ratio tabulated (4, 99) and as there is a statistically significant difference at the $p<.05$ in the scores $p=.000$ i.e. the significant is 0.00 n the ANOVA Table.

This reveals that deployment of CRM Improve organizational operation and also implies that customers' satisfaction is the driving force towards improvement of organizational operation.Also in the research questions below:

Research Question one

From the organizational perspective, does CRM improve organization with their customers?

Looking at the Descriptive Table, we discover that judging by the mean recorded that both the Marketing and front office staff who interact with the customer and who have deployed CRM performed better in their perceived level of improved relationship with the customer more than the front office and the marketing staff of the organization which has not deployed CRM.

The values are as follows: FRONT OFFICE WITH CRM, M=19.73 STD= 2.38

FRONT OFFICE WITHOUT CRM, M=10.37, STD= 2.72

MARKETING WITH CRM, M=20.51 STD=1.73

MARKETING WITHOUT CRM M=8.27, STD 1.62

This result is confirmed by the Post Hoc test table at the column mean difference which placed asterisks against the values respectively showing there is significant difference in the values. A look at the mean plot will graphically confirm the results too.

This result is in line with the report of (Chou et al, 2002) stated that CRM is a notion regarding how an organization can keep their most profitable customers and at the same time reduce cost, increase in values of interaction which then leads to high profits. This is also consistent with the study carried out by Revenio Jalagat (2016) to evaluate the extent of CRM application in Bank Muscat, Sultanate of Ornan, which showed that CRM positively impact the service quality and thereby improve organizational operations.

Research Question Two

Can CRM help to track organizational progress against their goal?

Furthermore, looking again at the table descriptive in Table 4.1 we discover that the organizations that does their market and objective analysis using CRM does better than organizations without them

ANALYSIS WITH CRM M=20.51, STD= 1.73

ANALYSIS WITHOUT CRM M=8.27 STD=1.62

This result is also confirmed by the Post Hoc test in the column mean difference by the asterisk against the values that has significant difference in means. Also the mean plot represents these differences graphically.

Reaserch Question Three

Does CRM help provide quality service to customers?

In this case the quality of service will be a major factor that determines volume of sales by the sales force since tariff is almost uniform across organizations. And also the value the customers derives from a product is directly proportional to the sales of the product and also.

Looking at the Descriptive Table once more and graph2, we notice that MTN which deployed CRM has the following sales values: (M=21.52, STD=1.788) Azash connect without CRM has the following values: (M=8.88, STD 1.6530) this shows quite a large difference in the sales mean of the two organizations. This shows that the customers valued the product and that is why the sales are high. This finding support Samson Nwankwo and Sunday Stephen Ajemunigbohun (2013) in their study on an empirical assessment from Nigeria's Insurance Industry. Which affirms that CRM positively influences customer retention in the Nigeria's Insurance company/organizations, and thus helps create values for insuring populace in Nigeria.

# CHAPTER FIVE
# CONCLUSION AND RECOMMENDATIONS

The following deals with the conclusions and recommendations of this research works:

## 5.1 Conclusions

This study investigated the impact of customer relation management for GSM operations (MTN/ AZASH CONNECT). Two hypotheses were formulated and tested with these objectives in mind

1. To examine the improvement in customers' relationship.
2. To examine the companies progress against their goals
3. To determine how to provide customer with experience and quality service in order to move them ahead.
4. To determine how to improve the Customers value.
5. To critically evaluate and check customer satisfaction level with MTN and AZASH CONNECT by observing the relation level to their customers.

The study also shows that customers information gathered can be used to improve customer's relationship management. Some of the strategies to use to improve customers relationship management are:

Prospecting new customers

Segmenting customers

Providing one to one marketing

Forging Customers loyalty.

The internet and customers database are potential means of gathering customers information and communication to build a strong relationship in the customer relationship management and ultimate impact on the way in which customers are fully incorporated into the organizational value chain by identifying

customers needs and feedback through the interaction with the customers eg, the organization has the ability through an integrated internet/database marketing infrastructure to understand what specific products/services attributes appeal to a customer.

Also, each and every customer relationship is valuable, fixing or responding to the immediate situation is the first order of business.

The findings above have therefore informed the conclusions that;

1. There is a significant difference in the improvement of organizational operations when CRM is used
2. Deployment of CRM software has significantly improved customers value.
3. CRM is a desirable phenomenon for building and sustaining a relationship with a customer.

## 5.2 Recommendations

The finding of this study brings to limelight the need for the following recommendation:

1. Improvement of customer relationship in order to boost broad based customer's confidence and hence encourage competitive trading in GSM market using CRM.
2. Product and service loyalty can hardly be over emphasized as this goes a long way in allowing companies to devote their energies to other business matters.
3. The right mix of CRM components and all the key factors strategy, leadership and integration need to be given due attention

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QUESTIONNAIRE LETTER TO THE RESPONDENT

Department of Project Management

Federal University of Technology, Owerri (Futo)

Imo State.

20th March, 2009.

Dear Respondent,

This questionnaire is part of my research tool for gathering sample information for use in my thesis in partial fulfillment of my post graduate study in Project Management Technology in the Federal University of Technology Owerri. The purpose of this research is to investigate the effect of Customer Relationship Management (CRM) applications in effective business successes of organizations. Information gathered here will be used for academic purposes only and will be kept strictly confidential.

Thank you.

Yours Faithfully,

Uchenna Ezeaku.

QUESTIONNAIRE

**SECTION A: PERSONAL INFORMATION**

Please tick the item that best describes you

Gender: Male ☐ Female ☐

Age group: < 20☐ 20 – 29 ☐ 30 – 39 ☐ 40 – 49 ☐ > 50 ☐

Educational qualification: OND/NCE ☐ HND/BSC ☐ M.Sc/Ph.D ☐

**SECTION B**

Is your organization involved in planning and deployment of Customer Relationship Management software? Yes ☐ No ☐

How many years of experience of deploying this solution does your company have? None

< 1 yr ☐ 1-5 yrs ☐ 5-10yrs ☐ 10- 15yrs ☐ 15-20yrs ☐ 20-25yrs ☐ ☐

25-30yrs ☐ 35-40yrs ☐ >40yrs ☐

Which CRM model does your company deploy?

Specify……..

**SECTION C**

This section will measure your perception of improvement CRM has made in your department.There is no right or wrong answer. Please choose your answers by ticking the corresponding box using the scale 1-5 as shown below according to your perception on the level improvement in your business department. If you have not implemented any CRM application choose the options based on your perception of improvement of the different items without the use of any CRM technology.

| Strongly disagree (SD) | Disagree (D) | Neither agree nor disagree (N) | Agree (A) | Strongly agree (SA) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

FRONT OFFICE Operations (Customer Service)

| | | SD | D | N | A | SA |
|---|---|---|---|---|---|---|
| 1 | We has effective Customer data collection mechanism | | | | | |
| 2 | We identify Customers desires | | | | | |
| 3 | We understand Customers expectation | | | | | |
| 4 | We have services that meet Customers expectation | | | | | |
| 5 | Customers expresses gratitude to us for meeting their needs | | | | | |

BACK OFFICE OPERATIONS (CRM)

| | | SD | D | N | A | SA |
|---|---|---|---|---|---|---|
| 1 | We have effective billing system | | | | | |
| 2 | We have effective maintenance system | | | | | |
| 3 | Our marketing/advert has effect on customers | | | | | |
| 4 | Our call rate has influence on customers | | | | | |
| 5 | Our marketing strategies pleases their Customers | | | | | |

ANALYSIS CRM

| | | SD | D | N | A | SA |
|---|---|---|---|---|---|---|
| 1 | We have a better knowledge of CRM activities than any other network provider | | | | | |
| 2 | We can accurately estimate the number of our Customers | | | | | |
| 3 | We can evaluate the type of Customers we have | | | | | |
| 4 | Our services affects the Customers behavior | | | | | |
| 5 | We properly monitor our market shares | | | | | |

SALES CRM

| | | SD | D | N | A | SA |
|---|---|---|---|---|---|---|
| 1 | We know how many switch-selling lost oppournites | | | | | |
| 2 | We monitor the Customers drift to other network | | | | | |
| 3 | We effectively measures our sales performance | | | | | |
| 4 | We identify Customer consistency/alignment to our services | | | | | |
| 5 | We identify the customer patronization margin | | | | | |

*APPENDIX I*

Table 1: Multiple Comparisons

Tukey HSD

| (I) factors | (J) factors | Mean Difference (I-J) | Std. Error | Sig. | 95% confidence interval | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| Front office with CRM | Front office without CRM | 11.692* | .692 | .000 | 9.55 | 13.84 |
| | Back office with CRM | -.692 | .692 | .973 | -2.84 | 1.45 |
| | Back office without CRM | 10.615* | .692 | .000 | 8.47 | 12.76 |
| | Analysis with CRM | .231 | .692 | 1.000 | -1.91 | 2.37 |
| | Analysis without CRM | 12.846* | .692 | .000 | 10.70 | 14.99 |
| | Sales with CRM | -1.615 | .692 | .286 | -3.76 | .53 |
| | Sales without CRM | 11.231* | .692 | .000 | 9.09 | 13.37 |
| Front office without CRM | Front office with CRM | -11.692* | .692 | .000 | -13.84 | -9.55 |
| | Back office with CRM | -12.385* | .692 | .000 | -14.53 | -10.24 |
| | Back office without CRM | -1.077 | .692 | .774 | -3.22 | 1.07 |
| | Analysis with CRM | -11.462* | .692 | .000 | -13.61 | -9.32 |
| | Analysis without | 1.154 | .692 | .708 | -.99 | 3.30 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | CRM | | | | | |
| | Sales with CRM | 13.308* | .692 | .000 | -15.45 | -11.16 |
| | Sales without CRM | -.462 | .692 | .998 | -2.61 | 1.68 |
| Back office with CRM | Front office with CRM | .692 | .692 | .973 | -1.45 | 2.84 |
| | Front office without CRM | 12.385* | .692 | .000 | 10.24 | 14.53 |
| | Back office without CRM | 11.308* | .692 | .000 | 9.16 | 13.45 |
| | Analysis with CRM | .923 | .692 | .883 | -1.22 | 3.07 |
| | Analysis without CRM | 13.538* | .692 | .000 | 11.39 | 15.68 |
| | Sales with CRM | -923 | .692 | .883 | -3.07 | 1.22 |
| | Sales without CRM | 11.923* | .692 | .000 | 9.78 | 14.07 |
| Back office without CRM | Front office with CRM | -10.615* | .692 | .000 | -12.76 | -8.47 |
| | Front office without CRM | 1.077 | .692 | .774 | -1.07 | 3.22 |
| | Back office with CRM | -11.308* | .692 | .000 | -13.45 | -9.16 |
| | Analysis with CRM | -10.385* | .692 | .000 | -12.53 | -8.24 |
| | Analysis without CRM | 2.231* | .692 | .035 | .09 | 4.37 |
| | Sales with CRM | -12.231* | .692 | .000 | -14.37 | -10.09 |
| | Sales without CRM | .615 | .692 | .986 | -1.53 | 2.76 |
| Analysis with CRM | Front office with CRM | -.231 | .692 | 1.000 | -2.37 | 1.91 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Front office without CRM | 11.462* | .692 | .000 | 9.32 | 13.61 |
| | Back office without CRM | -.923 | .692 | .883 | -3.07 | 1.22 |
| | Back office without CRM | 10.385* | .692 | .000 | 8.24 | 12.53 |
| | Analysis without CRM | 12.615* | .692 | .000 | 10.47 | 14.76 |
| | Sales with CRM | -1.846 | .692 | .145 | -3.99 | .30 |
| | Sales without CRM | 11.000* | .692 | .000 | 8.86 | 13.14 |
| Analysis without CRM | Front office with CRM | -12.846* | .692 | .000 | -14.99 | -10.70 |
| | Front office without CRM | -1.154 | .692 | .708 | -3.30 | .99 |
| | Back office without CRM | -13.538* | .692 | .000 | -15.68 | -11.39 |
| | Back office without CRM | -2.231* | .692 | .035 | -4.37 | -.09 |
| | Analysis with CRM | 12.615* | .692 | .000 | -14.76 | -10.47 |
| | Sales with CRM | -14.462* | .692 | .000 | -16.61 | -12.32 |
| | Sales without CRM | -1.615 | .692 | .286 | -3.76 | .53 |
| Sales with CRM | Front office with CRM | 1.615 | .692 | .286 | .53 | 3.76 |
| | Front office without CRM | 13.308* | .692 | .000 | 11.16 | 15.45 |
| | Back office without | .923 | .692 | | -1.22 | 3.07 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | CRM | | | | | |
| | Back office without CRM | 12.231* | .692 | .000 | 10.09 | 14.37 |
| | Analysis with CRM | 1.846 | .692 | | -.30 | 3.99 |
| | Analysis without CRM | 14.462* | .692 | .000 | 12.32 | 16.61 |
| | Sales without CRM | 12.846* | .692 | .000 | 10.70 | 14.99 |
| Sales without CRM | Front office with CRM | 11.231* | .692 | .000 | -13.37 | -9.09 |
| | Front office without CRM | .462 | .692 | .998 | -1.68 | 2.61 |
| | Back office without CRM | -11.923* | .692 | .000 | -14.07 | -9.78 |
| | Back office without CRM | -615 | .692 | .986 | -2.76 | 1.53 |
| | Analysis with CRM | -11.000* | .692 | .000 | -13.14 | -8.86 |
| | Analysis without CRM | 1.615 | .692 | .286 | -.53 | 3.76 |
| | Sales with CRM | 12.846* | .692 | .000 | -14.99 | -10.70 |

The mean difference is significant at o.o5 level.